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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,732	10/14/2003	Feng Lin	303.874US1	5405

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EXAMINER	
MIS, DAVID C	

ART UNIT	PAPER NUMBER
2817	

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/685,732	LIN, FENG	
	Examiner	Art Unit	
	David Mis	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-75* is/are pending in the application.

4a) Of the above claim(s) *26-51 and 70-75* is/are withdrawn from consideration.

5)☒ Claim(s) *17-25* is/are allowed.

6)☒ Claim(s) *1-9,12 and 52-69* is/are rejected.

7)☒ Claim(s) *10,11 and 13-16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *0405*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-25, 52-69, drawn to oscillator and bias generator, classified in class 331, subclass 176.

II. Claims 26-34, drawn to oscillator and bias generator and timing generator, classified in class 327, subclass 291.

III. Claims 35-43, 70-75, drawn to memory cells and refresh controller and refresh timer, classified in class 365, subclass 222.

IV. Claims 44-51, drawn to processor and memory and refresh controller and refresh timer, classified in class 711, subclass 106.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I to IV are successively related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the

species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as an oscillator / a timing generator / a memory respectively and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group II, III or IV is not required for Group I, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized

divergent subject matter, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Viet V. Tong on 04/06/05 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-25 and 52-69. Affirmation of this election must be made by applicant in replying to this Office action. Claims 26-51 and 70-75 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the

prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1-3, 6-9, 12, 52-69 are rejected under 35 U.S.C. 102(e.) as being clearly anticipated by Yamauchi et al.

Yamauchi et al disclosed a device comprising an oscillator (Figure 1, "2, 3") generating an oscillating signal having an oscillating frequency (column 4, line 51, where the period is the cycle time and is the reciprocal of the frequency); and a variable bias generator (Figure 1, "1") connected to the oscillator (Figure 1) for influencing the oscillating frequency to be proportional to the temperature (column 4, lines 54 to 67); ... reference current path ... (Figures 5 and 6, PT3, ir12 or ir22, and i2; Figure 12, Za-Zc, PT2 and ir12); ... generated current path ... (Figures 5, 6 and 12, PT4 and NT1); Re. Claim 8, the "control current path" is considered to be the same path as the "reference current path" of claim 1 since "control" and "reference" both fit its function; Re. Claim 9 the PT1 paths of Figures 5, 6 and 12 are considered to fit the "reference" function; Re. Claim 12, the figure 5 current sources ir11 and ir12 are temperature independent (column 7, lines 17-18) which currents correspond to current source voltages which also must be independent of temperature (i.e. the reference voltages to the gates of the current source transistors), and "control" fits the PT3 path function, and ... number of stages ... (Figures 3, 10, 11); ... multiple of ...

(any two numbers are a multiple of each other); ... charging and discharging a number of capacitors (Figures 3, 10, 11, the respective gate structure capacitors of the inverter stages charged and discharged by the previous inverter transistors).

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-9, 52-69 are rejected under 35 U.S.C. 102(b.) as being clearly anticipated by Letkomiller et al.

A device comprising an oscillator (Figure 5, "512") for generating an oscillating signal having an oscillating frequency ("Fosc'", column 38, lines 33-51); and a variable bias generator connected to the oscillator (Figure 3, "306, 308", column 36, lines 35-40, Figure 5) for influencing the oscillator frequency to be proportional to temperature (column 39, lines 22-28; column 14, lines 46-49; and column 22, lines 54-57); ... reference current path ... (P1, N1, Q1); ... generated current path ... (P6, P13, N10, column 41, line 60 to column 42, line 4); wherein the variable bias generator includes a control current adjuster connected to the reference current path (P6.05, S5, S6, ST1, column 36, line 64 to column 38, line 29) for generating a control current proportional to the reference current ("I(T)B"); Re. Claim 5, the generated current path P6, P13, N10 is connected to the control current adjuster P6.05, S5, S6, ST1 in the same current mirror path,

but still in "a current mirror configuration" and the generated current is modified by having the control current added to it; Re. Claim 8, the control current path and the generated current path share P13 and N10; Re. Claim 52, Vcc is a reference voltage independent of temperature (column 36, lines 46-50) and the current path currents are based on it since it supplies them; Re. Claim 69, one capacitor is "a number of capacitor" and the "control" and "reference" functions of the claims are interpreted as said above.

10. Claims 10, 11 and 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 17-25 are allowed.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Mis whose telephone number is (571)272-1765. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Mis
Primary Examiner
Art Unit 2817